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Discussion paper

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1. Developing countries have created and operated a large number of small- and medium-scale enterprises usually under a régime of institutional support. In general, however, the enterprises so created have faced a variety of production and management problems that the enterprises did not succeed to progress to higher levels of production and profitability. Modernization programmes have to be launched and seriously sustained to make the maximum use of installed capacity and to operate new ones on a profitable basis.

2. This paper concentrates on productivity improvements in an individual enterprise, workshops or offices of thousands of entrepreneurs manufacturing in or operating their own small- or medium-sized enterprise. The issue will touch upon a large variety of measures and services for the benefit of the small- and medium-scale enterprise sector, policy-makers in government offices, institutions, associations and co-operatives as well as private and publicly-owned industries.

3. Productivity improvement measures are specific requirements of the sector. The reasons are the variety of experiences of entrepreneurs, and more important their lack of experience in a number of fields.

4. Artisans and traders are the two largest groups of potential entrepeneurs of small- and medium-scale enterprises. The first group knows how to handle the material, possesses production skills at the artisan level, but needs training in more mechanized production. The artisan normally produces for a specific customer. Industrial production, however, needs different sales and distribution channels, since the products are manufactured for the open market. Therefore, a different market strategy would be required.

5. The second group, entrepreneurs with a trading background, faces difficulties in the fields of technology and engineering as well as in the production process. This group has less difficulty in purchasing raw materials and in marketing the products.

6. Entrepreneurs of small- and medium-scale enterprises could be characterized as those with self-reliance, willing to take risks and to solve problems. They are motivated by achievements, independent work and initiative to reach their goal which is to multiply their investment and earn their income in operating their business in a profitable manner. The entrepreneur is the most important and valuable element for building up a strong small- and medium-scale enterprise sector. Efforts to improve productivity should focus on the willingness and absorption capacity of the individual entrepreneurs. The network of institutes and services should provide the entrepreneur with timely information to enable appropriate decision-making. The built-in weaknesses of the entrepreneur and his/her lack of experience in some fields to operate his/her business should be the yardstick of the measures required. The services offered to the entrepreneur should enable him/her to take the right step and to counterbalance deficiencies.

7. The system of institutional measures and services available to the entrepreneur should allow for smooth, balanced and accelerated growth of small- and medium-scale enterprise units.

8. Productivity improvement measures should be applicable to potential would-be entrepreneurs to select the right project which suits his/her experience and financial means. The newly established enterprise should gain from those measures to overcome initial difficulties and develop in the right direction. A network of services should also be made available to the large number of existing enterprises which need to update and upgrade their

production to a higher level of technology. Such services should also be provided to sick or malfunctioning units which need restructuring in order to become viable and profitable. Subsequently, the services should be offered, as required, at the pre-investment stage, the implementation phase and at the operational and post-investment phase.

Institutional infrastructure, extension service and industrial estates

9. Institutional infrastructure and extension services should be closely related. A network of institutes is required to deliver the services to the clients. In other words, the institutes are the tool through which the missing knowledge and experience should be transmitted to the individual entrepreneurs. The ability to communicate successfully depends on the level of communication, the vocabulary used, and the means of delivery. The institutes' approach towards the clients should take into consideration the specific requirements of the target groups and their level. The ultimate goal of all institutes should be to identify and reach the recipients, owners or managers, foremen or workers of enterprises.

10. Small- and medium-scale enterprises are a diversified target group for extension service. Their problems are often complex. The requirements for support and assistance are manifold, ranging from supply of economic and other information to project appraisal, and training of staff for solving most sophisticated technological problems or advising on subcontracting arrangements.

11. From the substantive point of view, there are two main fields:

(a) Support in solving economic and managerial problems; and
(b) Advice on technological and engineering problems.

12. Regarding the economic and managerial field, the advice required could include the following:

- Supply of basic economic, statistical, legal, marketing and other information;
- All aspects of management, organization of work etc.;
- Guidance on cost accountancy (elements for price calculation);
- Advice on financial accountancy (preparation of balance sheets, financial planning etc.);
- Interpretation of tax and other legal requirements;
- Advice on potential sources of finance, preparation of documentation for application of loans and other appraisal documents;
- Identification of training requirements within the enterprise and selection of potential training sources;
- Identification of raw material supply;
- Guidance on the identification of additional domestic and export marketing possibilities, subcontracting arrangements and partners for co-operation etc.

13. In the fields of technology and engineering, required advice of small- and medium-scale enterprises could focus on:

- Choice of technology, equipment requirements, and selection of suppliers;
- Organization or reorganization of production with special emphasis on a more suitable flow of material;
- Solution of technological, technical or engineering problems;

- Quality control, standardization and design of products, especially for subcontracting or export production;
- Training in maintenance of machinery and equipment;
- Rental of production tools;
- Provision of complicated, expensive or special production facilities and equipment to be used on a time basis through common facility workshops;
- Production of spare parts, devices, tools, dies etc.;
- Product development and design;
- Development and adaptation of technology.

14. Many more items could be added to both these lists. Services of the economic, commercial and managerial group are more of an advisory nature, whereas some of the services in the technological and engineering sector contain advice on production elements and supply of items, as well as the provision of services such as maintenance which could be performed by commercial firms provided they were readily available to the client.

15. The services required can also be grouped into ad hoc requirements (or those required at irregular intervals) on the one side and regular services on the other. The preparation of feasibility studies, project identification and appraisal, product development, development and adaptation of technology, reorganization of production lines as a result of changes of technology or markets etc. would fall within the first category. The second category, regular services, consists of maintenance work, advice on book-keeping, raw material supply etc. Ad hoc or irregular services require close co-operation between the entrepreneur and the extension service personnel and have only a limited bearing on the training of the recipient, the entrepreneur and his staff. Regular services should be seen as a combination of service delivery and at the same time training of the client. The training element in this type of service is an important one. The enterprise should be in the position to operate independently and without external assistance after a certain time. It is one of the major principles of support to the small- and medium-scale enterprise sector that services are provided to enterprises as help for self-help. The support to individual units should be of a limited duration. Within the given time-frame, the enterpreneur and his/her workers should be trained sufficiently to enable them to operate the business independently and efficiently.

16. None of the institutes can be expected to perform the entire spectrum of non-financial services nor can they cover an entire country and reach all interested enterprises.

17. In practice, the main functions to be performed would be covered by one institute or by a number of institutes with branch offices in the major growth centres within a country. Every institute will specialize in certain fields and will serve enterprises in a certain location. The size and density of the network of institutes will depend on the industrial environment, the needs and intentions of policy-makers and, of course, on the funds set aside for such institutes.

18. In any case, an effective and efficient industrial extension service requires a network of institutions. A network means that institutes co-operate closely with each other; they should not operate in isolation of each other or the clients. Close co-operation between the different institutes on the one side and the institutes and the clients on the other is an indispensible prerequisite for an effective extension service as well as a conducive climate for growth of small- and medium-scale enterprises.

19. Proper co-operation among non-finance institutes as well as close liaison between non-financial service agents, finance institutes and banks are lacking in many countries. Experience has shown that close co-operation between all types of institutions is required to achieve the goal to provide small- and medium-scale enterprise units with the necessary services and create the climate conducive to accelerated growth of the sector.

20. The legal form of institutes providing such extension services ranges from government departments, semi-autonomous small industry service institutes and technical service centres to extension service departments of development banks or industrial estates, management and entrepreneurship development and training institutions operated by co-operatives or associations. One of the lessons learned from experience is that the institution serving the small- and medium-scale enterprise sector should act in a flexible and business-like manner. Government offices or government-owned and operated extension agents have by definition less flexibility. An analysis has shown that in general service institutions with less government involvement work more efficiently. Here again, the government is required to play a catalytic role at the early stage of small- and medium-scale enterprise development. In reaching a higher level of development, the private or semi-private initiative should be allowed to play a significant role in the provision of services.

21. Another lesson learned is that services provided free of charge are often not effective. Selection of clients does not take place and the extension service staff cannot cope with all requests.

22. Charges for some subsidized services should be given preference to free services. They should not be prohibitive and scare away clients who really need the services. It is a fact that paid services are more effective than those free of charge. In addition, the minimal income of the service institute through service charges would give some incentive to the extension service staff and reduce the burden of subsidizing the sector by the government.

23. Attention should also be paid to the terms of employment of extension or service institute staff. Employment should allow flexibility of work, achievement motivation and provide award for initiative. If necessary, exchange of staff whose performance is not up to standard should also be possible.

24. The determination of the function, location and kind of institute to provide services has always been problematic. In the 1970s, many small- and medium-scale enterprise development institutes were set up under the guidance of bilateral or multilateral technical co-operation schemes. Often, however, there was no prior survey of the requirements. The top-to-bottom approach to determine the needs did not work, and inefficient institutes were established, sometimes at the wrong location and staffed with inexperienced, unmotivated personnel. This type of institute is bound to fail and should be restructured, re-equipped and restaffed in order to become efficient support agents for small- and medium-sized enterprises.

25. Every entrepreneur needs a detailed feasibility study before the decision is taken to invest in the venture. Likewise a thorough analysis of the requirements of the existing small- and medium-scale enterprises and the expected and potential entrepreneurs should be made. Commercial firms or semi-private agencies should be included in the analysis.

26. Political factors should not influence the decision-making process in solving commercial and developmental problems. In elaborating the budget of institutes, the often high operational costs should be taken into account. In the past, many development centres, extension service agents, technical service centres or common facility centres have been donated to developing countries by large firms or through bilateral or multilateral technical co-operation schemes. Only after the official opening ceremony has the country realized that it was short of funds to operate the venture and that the requirements offered did not match those needed by the small- and medium-scale enterprise sector. The recurrent operational costs of development institutes of all kinds should not be underestimated. Lack of funds has in many cases been the reason for inefficient performance and insufficient contacts with the clients. The flexibility of the work and the mobility of staff generate high operational costs, but are indispensable for efficient delivery of services to the clients.

27. Among the various elements and measures to support growth of small- and medium-scale enterprises, industrial estates have a specific role to play. In the 1960s and 1970s, the construction of industrial estates was of high priority. Many industrial estates were established, but failed to be filled with enterprises. Return on investment did not achieve the expected results, since the buildings either deteriorated or were used for other purposes in order to recover the funds. This situation created some doubts as to the usefulness of industrial estates as a development tool for industrialization. The establishment of industrial estates is one way to provide factory space or shelter mainly to small-, but also to medium-sized industries. Industrial estates do not create enterprises or entrepreneurs. However, the provision of workshops to entrepreneurs helps them tremendously to overcome the initial difficulties during the starting period of an enterprise. An industrial estate is not "the tool" but a valuable element within the various instruments applicable to accelerated small- and medium-scale enterprise development. An industrial estate absorbs large amounts of capital by the sponsor, often the governments, and only liquidates them over a long period of time through the rent paid by the tenants. Industrial estates provide the physical infrastructure and modern and functional workshops. However, before starting construction, a detailed feasibility study of the industrial estate is required analyzing the demand for factory space, making a thorough and detailed calculation of costs and selecting a location.

28. Since an industrial estate is one of the support elements in the development of small- and medium-scale enterprises, enterprises located within industrial estates should qualify for the same comprehensive package of extension services as any other enterprise located elsewhere. In the 1970s, many industrial estate schemes underwent difficulties due to lack of those facilities.

29. Many industrial estate schemes offered rented factory space at subsidized rates as a benefit for start-up of an enterprise. They have acted as a kind of nursery for the enterprise with the result that the enterprise developed and enlarged without giving up their favourable position. Therefore, incentives should be offered to vacate the industrial estate in order to give a chance to a new enterprise.

Transfer and development of technology for small- and medium-scale enterprises

30. During the last decade, the industrial sector has undergone a change due to new technologies based on scientific research and application of electronic data processing and computerized production techniques. This change has also affected the small- and medium-scale enterprise sector. Many manufacturers of machines and equipment have designed products which suit their main markets - the markets of industrialized countries - but are to some extent not directly applicable to the conditions prevailing in developing countries. They are designed for labour saving and high production output, whereas the requirements of the developing countries call for more labour-intensive production techniques and lower capacities due to employment problems on the one hand and small markets and lower income on the other. This calls for more effort to identify technologies still suitable to the market and economic requirements of the majority of developing countries. Moreover, institutes should intensify research and development in the transfer and adaptation of technologies and initiate efforts towards the development of appropriate technologies. It could be effected either on the basis of increased co-operation between developing countries or through the opening up of new channels of co-operation between those countries and medium-sized or even small but specialized manufacturers in industrialized countries. Research in this field has not been adequate in the past and should be intensified in order to offer the technologies required by the small- and medium-scale enterprise sector in developing countries.

Marketing of small- and medium-scale enterprise products

31. Marketing has not been given the required attention by either the entrepreneurs of the small-scale units or the development institutes. The higher degree of development and communication has led to more complex marketing. Small-scale enterprises, however, regard marketing as a simple sales activity and have not devoted any effort to developing a marketing concept or a product strategy for their goods or a price, promotion and distribution strategy. In the case of small- and medium-scale enterprises, it is particularly important to define the target market and to determine special market niches or select specific segments of the market which would offer the most favourable sales conditions for the product.

32. Development institutes should take up or intensify their activities in advising and training in marketing strategies and techniques. Advice should include product costing, packaging (including improvements in design of packaging) and marketing channels.

33. Additional market outlets should be opened up for small- and medium-scale enterprise products such as government and/or institutional purchases. Measures to increase market outlets should be promotional and not of a protective nature. Protective measures should only be applied to stop unfair import competition even if it means higher consumer costs on a temporary basis. New suitable marketing strategies should be developed and made available to the enterprises; strategies should include the domestic market as well as the export market.

34. Small- and medium-scale enterprises should be supplied with market information and should receive guidance on market research for following up trends, changes and developments on both export and domestic markets.

35. Efforts should be made to invite selected small- and medium-scale enterprises to participate at relevant national and international trade fairs and exhibitions in order to open up new markets for their products.

Programme for subcontracting and enterprise-to-enterprise co-operation

36. Subcontracting between enterprises, mostly those of different sizes, is a special kind of marketing, a way of opening up new markets for small- and medium-scale enterprises. It should have two major aims, namely an additional market outlet for the products and possibility for converting small-scale production into specialized manufacturing activities. Subcontracting could normally be applied after the small- and medium-scale sector has reached a certain level of development, since in most cases the parts and components to be produced and supplied by the small unit to the large assembly company requiring a certain quality level are not a consumer good but a more complex part of equipment. Classical cases are supplies of parts to car, truck and engine assemblers or similar industries with a high degree of sophistication. However, supplies of simple washers, rods, wire or casted products have developed into successful long-term co-operation between large and small manufacturers with a constant growth in capacity as well as in sophistication of the product.

37. Three major areas offer possibilities for institutions to assist small entrepreneurs:

(a) Advice and guidance in initiating subcontracting relations on an individual basis such as:

- Identification of items with subcontracting potential;
- Identification of a large company as customer;
- Negotiations between the two partners in reaching agreement, including assistance in drafting the agreement;
- Acting as arbitrator between the partners in development and operation of the business venture. The main problem areas are price, delivery time, maintenance of quality and regular payment. Confidence between the partners is of great importance. Moreover, pressure exercised by the large partner on the small one should be avoided.
- Standard agreements for subcontracting agreements could be developed, tested and made available to both partners. The small partners should be assisted and advised in each individual case.

(b) In an industrial and economic climate which allows for accelerated growth of small- and medium-scale enterprises, subcontracting should be widely developed. The existing institutional network should also take up additional functions of subcontracting support and establish a subcontracting climate with a number of national subcontracting exchanges as the first step. Subcontracting is a matter of offer and demand. Subcontracting exchanges should make the capacities, machinery, equipment and skills of the supplier available and try to identify large- or medium-scale customers to initiate contacts between each other. In addition to the provision of offers and interests, subcontracting exchanges can also act as a neutral agency between the small and the large unit to function as an arbitrator between the two partners. Subcontracting exchanges would, in the long run, lead to specialization in the small- and medium-scale enterprise sector resulting in higher output, higher specialization of the product and increased quality.

Subcontracting exchanges have been established at national and regional levels. Experience with regional subcontracting exchanges has been excellent.

(c) Subcontracting should be seen as one step towards broader relationships between large and small enterprises and not only simply limited to the supply of a number of products of a certain quality, price etc. Subcontracting arrangements could be the starting point for closer co-operation focussing on the transfer of technology from large to small enterprises, introducing modern management methods under the guidance of the large partner and could then open up ways for financial support as well as joint efforts in research work.

38. A number of schemes have been introduced in Asian countries with reasonable success. Intensified efforts in this direction have led to steady and continuous modernization and upgrading of the small- and medium-scale enterprise sector.

39. Productivity improvements through a well developed network of infrastructural measures are manifold. However, in the paper, only the non-finance institution has been described. Provision of finance to the small- and medium-scale enterprise sector is a problematic area which deserves to be treated as a separate issue.

Final consideration

40. In the light of the needs of the small- and medium-scale enterprise sector outlined above, the Consultation may wish to examine the following proposals with a view to reaching conclusions and recommendations for enhancing productivity in the sector.

(a) Modernization of small- and medium-scale enterprises

- Programmes of modernization need to be drawn up and implemented in a coherent manner to meet national goals of integrated rural development, provision of goods and services to the rural, peri-urban and urban areas such as agro-processing, training, transport equipment, repair and maintenance and metalworking.

- Support measures in technology, spare parts production, training, management and marketing would need to be provided to raise productivity and profitability.

- The aim of modernization would be to facilitate the progression of small- to large-scale enterprises so that the financial entrepreneurial base of a country is fostered to attain sustainable growth.

(b) Institutional support measures

- Consulting engineering services provided either through the aegis of national institutions and/or directly are critical inputs for productivity improvements. They could provide economic and managerial advice including training, marketing, identification on sources of finance, technological and engineering problems and maintenance etc.; choice of technology, equipment and supplies; and product design and development as well as services related to project identification, pre-investment phase, implementation phase, post-investment phase and improvement/rehabilitation of enterprises.

- Regional networks of institutions serve a highly useful service in the sharing of experiences, technological co-operation, training and the provision of timely and relevant information for placing the operation of small- and medium-scale enterprises on an efficient and profitable basis.

- The most appropriate legal and technical forms of national support institutions as well as their operational modalities, including the provision for payment of fees for services rendered, should be determined on the basis of the stage of development, specific requirements and ultimate concern to be self-reliant after a reasonable period of nurturing.

- Industrial estates as an incentive to small- and medium-scale enterprises have had mixed results. The overriding view suggests that their establishment should be the subject of a rigorous cost-benefit analysis and that their users should vacate the premises after a reasonable period of time.

- Supply-side measures are effective and efficient in so far that policies on the demand side prove successful to generate flows of investments to small- and medium-scale enterprises.

(c) Transfer and development of technology for small- and medium-scale enterprises

- Productivity improvements and the viability of small and medium-scale enterprises are critically dependent on the choice, adaptation and application of technology. Therefore, research and development efforts should be channelled to the needs of small- and medium-scale enterprises and they should have access to research and development results in retooling their plants and in investing in new lines of production.

- Choice of technology should be the result of concerted inputs of economists, technicians and managers and should in general be tested in a pilot project prior to its wider dissemination.

- Small- and medium-scale enterprises have a challenging role to play in new and advanced technologies such as biotechnology and electronics as both investors and users. Their early entry into these industries should be encouraged through appropriate institutional support measures.

- The operations of small- and medium-scale enterprises should be supported through the provision of spare parts production and repair and maintenance facilities. These common services constitute a critical input for sustained growth of small- and medium-scale enterprises.

(d) Marketing of small- and medium-scale enterprise products

- Underutilization of installed capacities and the viability of new enterprises are constrained by lack of raw materials and marketing skills. The allocation of foreign exchange resources to buy provisions for small- and medium-scale enterprises should be a priority consideration in the approval of investment projects of governments as well as support measures and training in marketing.

- Reserving markets and procurements to small- and medium-scale enterprises and the participation of small- and medium-scale enterprises at national and international trade fairs should be encouraged.

(e) Programme for subcontracting and enterprise-to-enterprise co-operation

- Subcontracting as an additional market outlet for more advanced production of the small- and medium-scale enterprise sector;

- Subcontracting as the initial step for close co-operation between enterprises with the focus on enlarging market outlets, transfer of technology, joint research work and financial support.